DEPARTMENT OF TRANSPORTATION
Research and Special Programs Administration

DEPARTMENT OF HOMELAND SECURITY
Transportation Security Administration

Docket No. RSPA-2004-18730

Comment to Request for Comments in Federal Register Vol. 69, No. 157 submitted by Lat-Lon, LLC

OVERVIEW

Lat-Lon has a developed and deployed system for wireless monitoring of railcars that addresses a number of the security concerns outlined in RSPA-2004-18730. Specifically, it helps TIH shippers meet their obligations to protect TIH shipments against unauthorized access and to better track and protect their shipments while en route.

This system is commercially known as RailRider™ and has been available to industry since 2000. There are over 3,200 RailRider™ units installed on rail cars today that have collectively traveled over 250 million miles. These systems were purchased because they help rail shippers and railroads to better manage their operations, improve security, reduce damages to the commodity in shipment, and create a competitive advantage.

With this response, Lat-Lon overviews the areas where its existing RailRider system enhances security for rail shipments of TIH. Comments are limited to those areas of RSPA-2004-18730 that relate to wireless monitoring technology.

RAILRIDER DESCRIPTION

RailRiders are self-contained, compact, solar powered wireless tracking and monitoring systems. At present, they communicate over the cellular control channels (AMPS). Long term deployment has shown that AMPS provides real-time connectivity over 97% of the time across North America. Lat-Lon is also now developing a satellite communications platform for the RailRider, and is in beta-testing for a CDMA solution. More information about the RailRider product line is available at www.lat-lon.com.

LAT-LON'S RESPONSE TO SPECIFIC QUESTIONS

III - A. Security Plans - Lat-Lon is working with many proactive companies and railroads that use monitoring and tracking devices to improve the security and tracking of their

railcars. Lat-Lon is not directly involved with developing or implementing security plans with its customers as specified in Docket No. RSPA-02-12064 (HM-232, 68 FR 14510).

III - B. Identification of Materials and Hazard Communication - Lat-Lon's RailRider devices can send the owner information in three ways. (1) A timed report at programmed time interval, (2) A polled request to send the latest report information, or (3) An alarm message that can be immediately sent to a cell phone or pager when an alarm condition is met. An alarm report usually reports the car number, time, location, nearest town, type of alarm, and severity of event such as TIH release in parts per million. This information coupled with other customer information can be used to initiate emergency plans.

Lat-Lon will assist DHS in their study to examine alternative methods for communicating critical information regarding hazardous materials transported in rail tank cars including electronic methods.

III - C. Temporary Storage of TIH Materials in Rail Tank Cars

1. No comment

2. Limits on the amount of storage are not necessary from a monitoring standpoint since it is usually tied into an economic decision. Many of Lat-Lon's potential customers have asked for security and level monitoring for temporary storage of TIH materials to improve their efficiencies. Should DOT/DHS decide to implement limits on the amount of TIH materials stored in tank cars, RailRiders can be used to help manage and enforce this regulation by providing the location, load/unload activity, and quantity of chemical in a railcar.

3. RailRiders report the date and time with each message so it is easy for a customer to monitor the amount of time a railcar is at a location. RailRiders can be used to help manage and enforce this regulation by providing the amount of time a tank car spends at specific locations as well as the load/unload activity, and quantity of chemical in a railcar.

4. No comment

5. No comment

6. Real time information from RailRiders is currently helping both shippers and their customers better manage their inventory. As the system is installed on a greater number of tank cars, it can be used to provide both information to better manage the rail supply chain and could be passed to a national security monitoring location (i.e., a Rail Traffic Control System similar to the Air Traffic Control System) for risk analysis.

III - D. Tank Car Integrity

1. Lat-Lon has an existing product line that reports open-hatch events on tank cars and break-wire events on valves. These easy to install devices do not require any new procedures on behalf of the shipper or recipient. It should be noted that most TIH tank cars have only one hatch at the top of the tank. Lat-Lon's system reports any attempts at tampering that may occur in this area during shipment.

2. No Comment

3. Lat-Lon has an existing product line for detecting chlorine release from tank cars. Detection systems for other TIH chemicals (such as Ammonia) can also be developed and integrated into Lat-Lon's existing and field-proven platform.

4. Lat-Lon's customers purchase systems based on a positive return on investment that is created by improving operations. The cost/benefit analysis for stopping one terrorist attack is immeasurable.

III - E. Communication and Tracking

1. Lat-Lon has over 30 rail customers currently using RailRider wireless monitoring systems on their railcars. These systems perform a wide variety of monitoring functions including load temperature, impact, vibration, open door, open hatch, break wire detection, chemical release, bearing temperature monitoring, engine run/engine status (reefer cars), and over speed alarms. Many reporting features are available including fleet report, car report, geofence report, non-activity report, and of course alarm reports.

   The practical limitations of wireless monitoring technology for railcars may be best understood in terms of power availability and economics. Trains tend to move slowly at an average speed of 18 miles per hour. Customers limit the number of transmissions from their railcars because of the slow average speed and in order to save data service costs. Rail shippers are extremely price conscious. Lat-Lon has recently introduced a poling function for select RailRider product lines, and this feature allows rail shippers to get information from railcars on an as-needed basis.

   Sensors are limited to those that can be operated by solar power supply. At times sensors must also be duty-cycled to insure all systems operate within the available power.

   Customers currently use magnetic (non-permanent) mounted RailRiders for critical one way shipments. These systems usually have built in sensors, although they may also have easy to install external sensors.

   Because RailRiders are self-powered, they are not affected by local power outages. It is possible that cellular towers could be knocked out of service. In this situation, RailRiders will store their data until an operational tower is in range. Lat-Lon is not

aware of any instances of interrupted service from interference, weather, and geographical phenomena since the RailRider product was introduced in 2000.

There are numerous benefits associated with wireless monitoring systems. These benefits are well proven through existing customer deployments and have been documented in trade journals (published articles about Lat-Lon's RailRider are available at our companies web site www.lat-lon.com). These benefits can be summarized as follows:

a. Increased fleet utilization
Increased fleet utilization is achieved through combining better asset visibility with proactive fleet management.

With RailRider, car owners know exactly where their railcars are whether they are in their own loading yards, in a customer's facility, or in transit. And because the information is provided wherever a railcar is, the data is more timely, more accurate, and more reliable than the existing railcar tracking system.

Through RailRiders open hatch/closed hatch alarm feature, fleet owners are able to determine the status of a car in transit, including:

- If a railcar has arrived at the customers site but has not been unloaded
- If cars have been unloaded and are still not released to the railroad
- If cars have been unloaded and released and are now outside the customers site awaiting pick-up.

This type of information allows the rail shipper to work with the railroads, end customers, and yard managers to improve turn-around times throughout the supply chain.

It has been estimated by one rail shipper that his overall fleet utilization could reduce the number of cars by over 10% with the above information. Actual improvements will naturally very depending on current utilization.

b. Decreased demurrage charges
Railroads levy demurrage charges if rail shippers do not quickly move railcars off railroad sidings and into their yards. Often these charges are issued months after the incident, and rail shippers have no recourse but to pay these charges. Lat-Lon's system will allow rail shippers to know at once when a car is dropped off at a siding. They also allow rail shippers to protect themselves against inaccurate charges that may be levied at a future date.

c. Increased demurrage received by the car owner from the customer.
At times Chemical users keep railcars at their site longer then they should. If the railcar has not been unloaded, the shipper should receive demurrage

charges to compensate for the unavailability of the railcar. A shipper may claim that this railcar has already been unloaded and therefore avoid these demurrage charges. RailRider systems allow tank car owners to know when a railcar has been unloaded, and accurately levy demurrage charges if it has not been unloaded.

d. Avoidance of excess mileage charges from the railroads
Historical data on routes traveled can be used to confirm appropriate billing. One Lat-Lon customer was charged excess mileage for haulage by a class I. They used data from their RailRider unit to prove that the mileage was incorrect. They received over $70,000 in reimbursements from the railroad.

e. Increased customer satisfaction.
Customers that know when they will receive their shipments can better manage their own operations, and increase their profitability. Customers that provide quick railcar turn-arounds may be rewarded with favorable rates. Customers prefer to work with proactive suppliers that use current technologies to manage operations and protect the public.

f. Benefits for Public Safety
RailRiders allow for a prompt and appropriate response to chemical release events. This is because the devices provide both the amount of release in PPM as well as the time and location of the event. In addition, hatch-open data can help make an early determination if the event is an accidental or intentional release.

At present when chemical releases occur on a railcar they typically go unchecked until they are reported by people who live near a rail road track or yard. By this time, they have already put individuals at risk. Lat-Lon's system detects releases before they reach populated areas.

Providing an early warning system will both help protect the public and also improve the image of the Chemical industry.

2. No Comment

3. Lat-Lon has been providing the rail industry with small, self contained tracking systems on a wide variety of rail shipments since early 2000. This technology is not only feasible, it is mainstream and has saved RailRider users millions of dollars. Existing and deployed Lat-Lon RailRider systems report when a sensor has been tripped and also can report based on receiving a poled 'request' via wireless. Lat-Lon also supplies subordinate sensor equipment that can report to a "base station" tracking system either on a railcar or on a locomotive. This system has been tested at TTCI in Pueblo, Colorado.

4. Lat-Lon's has created a secure data communication pathway for its data. All messages are encoded at the RailRider and then decoded when the message gets to Lat-Lon's servers. The messages can have different types of encode/decode methods based on the product type and customer. Access to data is protected by a 128 bit SSL security certificate which requires a customer to input a user name and password. Lat-Lon has taken several measures to protect its data from malicious use by creating a network of security levels and limiting traffic to known channels. Lat-Lon also incorporates redundant systems, from power to processing, to insure that the data is accessible.

5. RailRiders provide timed reports so that shippers can intermittently keep track of shipments en route. Sensors continuously monitor sensitive railcar functions such as chemical release. If a sensor reaches an alarm condition, then it alerts the shipper via cell phone, pager, etc. This essentially is continuous monitoring of the railcar without having to spend the communications charges required by continuous real-time monitoring.

6. No incentives are necessary. This is an existing technology that can have a bottom line benefit for the supply chain companies involved. The benefits to Homeland Security are significant, and argue for a combined public/private effort.

III - F. Additional Issues - Lat-Lon believes that our wireless monitoring solution meets all of the requirements of Executive Order 12866. Specifically, 1) RailRiders offer significant benefits to the rail shipper; 2) Adapting RailRiders will not require industry to change the way they handle their deliveries. For example, a new locking system for tank cars would likely require a new system of handling keys or numeric codes; 3) RailRiders do not add to the weight of a tank cark, and therefore will not reduce the rail cars carrying capacity; 4) RailRiders are an existing technology that is understood by all railroads and most rail shippers; 5) Relative to other technologies that would require the modification of the railcar, RailRiders are economical to purchase and operate.

The fact that Lat-Lon's systems are not burdensome to industry can best be understood by looking at the company's large and growing customer base. To date, every Lat-Lon customer has ordered our systems to improve their bottom line by increasing efficiencies and reducing costs.